

PROPOSED AMENDMENTS TO THE CLAIMS

Claims 1 to 46. (Previously Cancelled)

Claim 47. (Currently Amended) A method of generating exogenic allelism in a plant, the method comprising the steps of:

(a) providing a first plant and a second plant each including an expression cassette in the same chromosomal location, said expression cassette comprising:

(i) a first segment comprising a first promoter sequence;

(ii) a second segment comprising a first transcribable polynucleotide sequence; and

(iii) a third segment comprising a second transcribable polynucleotide sequence, said second transcribable polynucleotide sequence being operatively linked to a second promoter sequence, said third segment being flanked by said first and second segments, wherein a pair of site-specific recombination sequences are disposed one between said first segment and said third segment and another between said second segment and said third segment, such that said first promoter sequence is operatively coupled with said first transcribable polynucleotide sequence only following excision of said third segment from the expression cassette by site specific recombination via said pair of site-specific recombination sequences;

(b) introducing a polynucleotide sequence encoding a recombinase into said first plant, or crossing said first plant with a plant that has been transformed with a polynucleotide sequence encoding a recombinase, so as to excise said third segment thereby operatively adjoining said first transcribable polynucleotide sequence to said first promoter sequence;

(c) selfing a plant resulting from step (b) and selecting a progeny devoid of said recombinase, wherein the progeny comprises having the expression cassette wherein in which the third segment has been excised; and

(d) crossing a plant resulting from step (c) with said second plant thereby obtaining an offspring characterized by exogenic allelism, wherein expression of the first and the second transcribable polynucleotide sequences results in male sterility of the plant.

Claim 48. (Previously Cancelled)

Claim 49. (Currently Amended) A method of generating exogenic allelism in a plant, the method comprising the steps of:

(a) providing a first plant and a second plant each including an expression cassette in the same chromosomal location, said expression cassette comprising:

(i) a first segment comprising a first transcribable polynucleotide sequence, said first transcribable polynucleotide sequence being operatively linked to a first promoter sequence, said first segment being flanked by a pair of first site-specific recombination sequences; and

(ii) a second segment, being linked to said first segment, said second segment comprising a second transcribable polynucleotide sequence, said second transcribable polynucleotide sequence being operatively linked to a second promoter sequence, said second segment being flanked by a pair of second site-specific recombination sequences;

(b) introducing a first polynucleotide sequence encoding a recombinase into said first plant, or crossing said first plant with a plant that has been transformed with a polynucleotide sequence encoding the first recombinase, so as to excise said first segment, and selfing said first plant and selecting a progeny devoid of said first recombinase, wherein the progeny comprises having the expression cassette ~~wherein~~ in which the first segment has been excised;

(c) introducing a second polynucleotide sequence encoding a recombinase into said second plant, or crossing said second plant with a plant that has been transformed with a polynucleotide sequence encoding the second recombinase, so as to excise said second segment, and selfing said second plant and selecting a progeny devoid of said second recombinase, wherein the progeny comprises having the expression cassette ~~wherein~~ in which the second segment has been excised; and

(d) crossing a plant resulting from step (b) with a plant resulting from step (c), so as to generate an offspring characterized by exogenic allelism, wherein expression of the first and the second transcribable polynucleotide sequences results in male sterility of the plant.

Claim 50. (Previously Cancelled)

Claim 51. (Currently Amended) A plant homozygous for an expression cassette comprising:

(a) a first segment comprising a first transcribable polynucleotide sequence, said first transcribable polynucleotide sequence being operatively linked to a first promoter sequence, said first segment being flanked by a pair of first site-specific recombination sequences; and

(b) a second segment, being linked to said first segment, said second segment comprising a second transcribable polynucleotide sequence, said second transcribable polynucleotide sequence being operatively linked to a second promoter sequence, said second segment being flanked by a pair of second site-specific recombination sequences, said second transcribable polynucleotide sequence encoding a polypeptide or an RNA molecule capable of regulating an expression level of a product of said first transcribable polynucleotide sequence, wherein expression of the first and the second transcribable polynucleotide sequences results in male sterility of the plant.

Claims 52-55. (Previously Cancelled)

Claim 56. (Currently Cancelled)

Claim 57. (Currently Cancelled)

Claim 58. (Currently Amended) A plant or plant seed produced according to the method of claim 47, wherein the plant or the plant seed is characterized by exogenic allelism, and by a genome that lacks a polynucleotide sequence encoding an exogenic recombinase.

Claim 59. (Currently Cancelled)

Claim 60. (Currently Amended) A plant or plant seed produced according to the method of claim 49, wherein the plant or the plant seed is characterized by exogenic allelism, and by a genome that lacks a polynucleotide sequence encoding an exogenic recombinase.

Claim 61. (Currently Cancelled)

Claim 62. (Previously Added) The method of claim 47, wherein the ~~first~~ second exogene encodes a cytotoxic polypeptide or a cytostatic polypeptide.

Claim 63. (Previously Added) The method of claim 62, wherein the polypeptide is pectate lyase, 1-3 β -glucanase, avidin, streptavidin, diphtheria toxin A-chain, URF13, indole acetic acid-lysine synthetase, CytA toxin, RNase-TI or Barnase.

Claim 64. (Currently Amended) The method of claim 47, wherein the ~~first~~ second exogene encodes is an RNA molecule selected from the group consisting of an antisense RNA molecule and a ribozyme RNA molecule.

Claim 65. (Currently Amended) The method of claim 47, wherein the expression product of the second ~~first~~ exogene ~~encodes a transactivator non-operable with eukaryotic promoters~~ transactivates the expression of the second exogene.

Claim 66. (Currently Amended) The method of claim 65, wherein the ~~transactivator~~ expression product is a bacterial RNA polymerase or a bacteriophage RNA polymerase.

Claim 67. (Previously Added) The method of claim 47, wherein the first promoter sequence is selected from a group consisting of constitutive promoters and induced promoters.

Claim 68. (Currently Amended) The method of claim 47, wherein the ~~second~~ first promoter sequence is a tissue specific promoter.

Claim 69. (Previously Added) The method of claim 47, wherein the expression products of the first and the second exogenes assemble into a hetero-oligomeric protein.

Claim 70. (Previously Added) The method according to claim 69, wherein the hetero-oligomeric protein is cytotoxic or cytostatic protein.

Claim 71. (Previously Added) The method of claim 49, wherein the first exogene encodes a cytotoxic polypeptide or a cytostatic polypeptide.

Claim 72. (Previously Added) The method of claim 71, wherein the polypeptide is pectate lyase, 1-3 β -glucanase, avidin, streptavidin, diphtheria toxin A-chain, URF13, indole acetic acid-lysine synthetase, CytA toxin, RNase-TI or Barnase.

Claim 73. (Currently Amended) The method of claim 49, wherein the first exogene encodes is an RNA molecule selected from the group consisting of an antisense RNA molecule and a ribozyme RNA molecule.

Claim 74. (Currently Amended) The method of claim 49, wherein the expression product of the second exogene ~~encodes a transactivator non-operable with eukaryotic promoters~~ transactivates the expression of the first exogene.

Claim 75. (Currently Amended) The method of claim 74, wherein the ~~transactivator~~ expression product is a bacterial RNA polymerase or a bacteriophage RNA polymerase.

Claim 76. (Currently Amended) The method of claim 49, wherein the ~~first~~ second promoter sequence is selected from a group consisting of constitutive promoters and induced promoters.

Claim 77. (Previously Added) The method of claim 49, wherein the second promoter sequence is a tissue specific promoter.

Claim 78. (Previously Added) The method of claim 49, wherein the expression products of the first and the second exogenes assemble into a hetero-oligomeric protein.

Claim 79. (Previously Added) The method according to claim 78, wherein the hetero-oligomeric protein is cytotoxic or cytostatic protein.